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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/891,531	06/27/2001	Joun Ho Lee	8733.451.00	3199
30827	7590	10/12/2004	EXAMINER KIELIN, ERIK J	
MCKENNA LONG & ALDRIDGE LLP 1900 K STREET, NW WASHINGTON, DC 20006			ART UNIT 2813	PAPER NUMBER

DATE MAILED: 10/12/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/891,531

Applicant(s)

LEE, JOUN HO

Examiner

Erik Kielin

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 July 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-21 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 4/19/2004.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 29 June 2004 has been entered.

Information Disclosure Statement

2. The information disclosure statement filed 19 April 2004 fails to comply with 37 CFR 1.98(a)(3) because it does not include a concise explanation of the relevance, as it is presently understood by the individual designated in 37 CFR 1.56(c) most knowledgeable about the content of the information, of each patent listed that is not in the English language. It has been placed in the application file, but the information referred to therein has not been considered.

In particular, the Korean Patent Abstract --alone-- is insufficient to determine the extent to which the publication, KR 10-2000-31956 reads on the instant invention. In as much as, the KR 10-2000-31956 publication shares a common assignee to the instant application (LG Phillips LCD Co., Ltd.), and qualifies a prior art under 35 USC 102(b) because it was published more than one year prior to the filing in the United States, Applicant is respectfully requested to provide the entirety of the document and a translation, so that it may be properly considered. In this regard, **Applicant is directed to 37 CFR 1.105 and MPEP 704.10 [R-2].**

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims 1-5, 9, 10 and 11-15, 17, 20, 21 are rejected under 35 U.S.C. 102(e) as being anticipated by US 6,452,656 B2 (Niwano et al.).

Regarding claims 1 and 11, Niwano discloses an in-plane switching mode LCD device having a plurality of pixels and method of forming the LCD comprising:

first 1 and second 30 substrates;

data line 3 (called “signal line” in Niwano) and gate line 2 (called “scanning line” in Niwano) on the first substrate to define a plurality of pixel regions (Fig. 19a);

at least one data electrode 5 (called “driving electrode” in Niwano) on the first substrate;

at least one common electrode 8 on the first substrate;

a transparent conductive film 6 (called “opposite electrode” in Niwano) in a layer over the common electrode, the transparent conductive film electrically connected with the common electrode 8 (Fig. 24a; col. 9, lines 54-61 -- especially line 59); and

a liquid crystal layer 11 between the first and second substrates, wherein the data electrode and the common electrode generate an in-plane electric field substantially parallel to the first and second substrates (Title; Abstract; col. 1, lines 5-15) for controlling an amount of light at the respective pixel region.

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(See also section entitled "Embodiment 2" in cols. 11 and 12.)

Regarding claims 2 and 17, the transparent conductive film includes indium tin oxide (ITO) as indicated at col. 9, lines 54-61.

Regarding claim 3, a gate insulating film 9 is on the common electrode 8 (Fig. 24a).

Regarding claim 4, a passivation film 10 is on the common electrode 8.

Regarding claims 5 and 14, the common electrode 8 is electrically connected with the transparent conductive film 6 through a contact hole 18 (Fig. 23a-24a) in the passivation film 10.

Regarding claim 9, the transparent conductive film is formed outermost to the common electrode (Fig. 19a).

Regarding claims 10 and 21, the transparent conductive film 6 extends toward the data electrode 5 (Fig. 24a).

Regarding claim 12, the common electrode 8 is selected from the group of consisting of Al, Cr, Ti and Al alloy. See col. 9, lines 5-11 which indicates that the signal line 2 is formed of the instantly claimed materials. See Fig. 20a and associated text in col. 12, lines 3-6 which indicate that 2 and 8 (the common electrode) are formed simultaneously and are shown to be of the same material. Accordingly the common electrode 8 is formed of the same materials as the layer 2.

Regarding claim 13, the step of forming a passivation film 19 on the data electrodes is disclosed in Fig. 42a. (See also col. 17, lines 28-32.)

Regarding claim 15, the step of electrically connecting the common electrodes with the transparent conductive film is disclosed in Fig. 24a, as noted above.

Regarding claim 20, the transparent conductive film is formed outmost to the common electrodes (Fig. 19a).

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claim 6 is rejected under 35 U.S.C. 102(e) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over **Niwano**.

Although the common electrode is not indicated to be electrically connected with the transparent conductive film through a laser welding process, this limitation does not have patentable weight in the absence of differences between the electrical connection disclosed in Niwano and that produced by laser welding.

Note that a “product by process” claim is directed to the product per se, no matter how actually made, *In re Hirao*, 190 USPQ 15 at 17 (footnote 3). See also *In re Brown*, 173 USPQ 685; *In re Luck*, 177 USPQ 523; *In re Fessmann*, 180 USPQ 324; *In re Avery*, 186 USPQ 161; *In re Wertheim*, 191 USPQ 90 (209 USPQ 554 does not deal with this issue); *In re Marosi et al*, 218 USPQ 289; and particularly *In re Thorpe*, 227 USPQ 964, all of which make it clear that it is the patentability of the final product per se which must be determined in a “product by process” claim, and not the patentability of the process, and that an old or obvious product produced by a

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new method is not patentable as a product, whether claimed in “product by process” claims or not. Note that applicant has the burden of proof in such cases, as the above case law make clear.

7. Claims 7, 8, 18, and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Niwano** in view of Applicant’s admitted prior art (**APA**).

The prior art of **Niwano**, as explained above, discloses each of the claimed features except for indicating the identity of the liquid crystal.

APA indicates that cyano (CN) based and fluorine (F) based liquid crystals are known in the art (instant specification p. 5, lines 6-21).

It would have been obvious for one of ordinary skill in the art, at the time of the invention to use either of CN or F bases liquid crystals at taught by **APA** in the LCD of **Niwano** because **Niwano** is silent to the identity of the liquid crystal such that one of ordinary skill would be motivated to use known liquid crystals such as those indicated to be know by **APA**. Moreover, it has been held that the selection of a known material based on its suitability for its intended use is *prima facie* obvious. The selection of a known material based on its suitability for its intended use supported a *prima facie* obviousness determination in *Sinclair & Carroll Co., Inc. v. Interchemical Corp.*, 325 U.S. 327, 65 USPQ 297 1945) (Claims to a printing ink comprising a solvent having the vapor pressure characteristics of butyl carbitol so that the ink would not dry at room temperature but would dry quickly upon heating were held invalid over a reference teaching a printing ink made with a different solvent that was nonvolatile at room temperature but highly volatile when heated in view of an article which taught the desired boiling point and vapor pressure characteristics of a solvent for printing inks and a catalog teaching the boiling

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point and vapor pressure characteristics of butyl carbitol. "Reading a list and selecting a known compound to meet known requirements is no more ingenious than selecting the last piece to put in the last opening in a jig - saw puzzle." 65 USPQ at 301.). See also *In re Leshin*, 125 USPQ 416 (CCPA 1960) ("Mere selection of known plastics to make container-dispenser of a type made of plastics prior to the invention, the selection of the plastics being on the basis of suitability for the intended use, would be entirely obvious; and in view of 35 U.S.C. 103 it is a wonder that the point is even mentioned.") (See MPEP 2144.07.)

8. Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over **Niwano** in view of US 6,124,851 (**Jacobson**).

The prior art of **Niwano**, as explained above, discloses each of the claimed features except for indicating that the electrical connection between the common electrode and the transparent conductive film is formed through a laser welding process.

Jacobson teaches that it is known in the art to use laser welding to form electrical connections between ITO (a transparent conducting film) and another metal electrode using laser welding --specifically for display devices (col. 4, lines 19-35).

It would have been obvious for one of ordinary skill in the art, at the time of the invention to use laser welding as taught by **Jacobson** to form the electrical connection in **Niwano** because **Jacobson** teaches that it is an art known means for forming the electrical connection. Moreover, the instant specification provided no indication that there exists some unexpected result by using laser welding as apposed to other known means for forming electrical connections between electrodes.

Response to Arguments

9. Applicant's arguments filed 29 June 2004 have been fully considered but they are not persuasive.

Applicant's only substantive argument is that Niwano fails to disclose the feature, "wherein the data electrode and the common electrode generate an in-plane electric field substantially parallel to the first and second substrates for controlling an amount of light at the respective pixel region." Examiner respectfully disagrees. As noted in the title, abstract and at col. 1, lines 5-15, the Niwano LCD is an IPS, or in-plane switching LCD, which is, by definition, generates an electric field in the plane of the substrate or parallel to the substrate, as expressly stated in Niwano. Furthermore, given that the substrates are parallel to each other in an LCD, if the electric field is parallel to one substrate, the electric field is axiomatically parallel to the other substrate. Accordingly the argument is not persuasive.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Erik Kielin whose telephone number is 571-272-1693. The examiner can normally be reached on 9:00 - 19:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Carl Whitehead, Jr. can be reached on 571-272-1702. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Erik Kielin
Primary Examiner
9 October 2004